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attaching a pin to a superior portion of the acetabulum; and coupling a pin reference device to the pin by passing the pin through a bore formed in a first section of the pin reference device, the first section of the pin reference device having two degrees of freedom relative to the pin and the pin reference device further including a rod that is pivotally attached to the first section, wherein the rod comprises the first reference member and defines the reference axis for orienting the acetabulum component within the acetabulum.

- 11. The method of claim 10, wherein the prescribed orientation is based on a patient-specific anterversion angle and an inclination angle.
- 12. The method of claim 11, wherein the patient-specific anteversion angle is increased by a predetermined amount of degrees a pelvis of the patient flexes during sitting as determined by an image of the patient.
- 13. The method of claim 10, wherein the step of selecting a prescribed orientation of the acetabular component comprises the steps of: 20

obtaining a sitting lateral radiograph;

obtaining a standing lateral radiograph; and

determining a change in pelvic tilt based on the sitting and standing radiographs, the prescribed orientation being selected based on the change in pelvic tilt.

14. The method of claim **10**, further comprising the steps of:

inserting a pin guide into an opening formed in a surface of the patient-specific acetabular guide that is opposite the contact surface, the pin guide having a pin receiving section that has a bore defined by a first axis that is parallel to an axis of the handle of the patient-specific acetabular guide;

inserting an axis pin through the bore, the axis pin comprising the first reference member;

fixedly attaching the axis pin to a superior portion of the acetabulum; and

removing the pin guide from the patient-specific acetabular guide and removing the patient-specific acetabular guide from the acetabulum, whereby the axis pin defines the reference axis for orienting the acetabulum component within the acetabulum.

15. A method for implanting an acetabular component in an acetabulum of a patient comprising the steps of:

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inspecting a pre-operative plan including a three-dimensional image of the specific patient;

selecting a prescribed target orientation of the acetabular component;

constructing a patient-specific acetabular guide having a contact surface that is made to conform to an acetabular notch of the acetabular of the patient in accordance with the three-dimensional image of the specific patient and the prescribed target orientation;

orienting the patient-specific acetabular guide in the acetabulum of the specific patient by attaching a first electronic device to the superior acetabulum, the first electronic device being defined by a first known coordinate system, wherein the patient-specific guide includes a second electronic device removably attached thereto, wherein when the acetabular guide is inserted into the acetabulum at the prescribed target orientation in which the contact surface interlocks with the acetabular notch of the patient's acetabulum, the second electronic device is defined by a second known coordinate system which is defined relative to the first electronic device and which is saved in memory;

removing the patient-specific guide from the acetabulum and removing the second electronic device from the patient-specific guide;

attaching the second electronic device to the acetabular component;

preparing the acetabulum for receiving the acetabular component; and

moving the acetabular component in the prepared acetabulum until the second electronic device is defined by the saved second known coordinate system, thereby representing that the acetabular component is at the prescribed target orientation.

16. The method of claim **15**, wherein the first and second electronic devices comprise first and second orientation sensors, respectively, that communicate with one another.

17. The method of claim 16, wherein second orientation sensor includes a display that shows in real time a current orientation of the second orientation sensor relative to the prescribed target orientation and guides a user to the prescribed target location at which indicia for the current orientation is superimposed on indicia for the prescribed target orientation.

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